

Claim Amendments

1. (Canceled).
2. (Canceled).
3. (Previously presented) A horizontal wind generator as in claim 11 wherein the cross member comprises a rectangular frame having upper and lower horizontal members, with the C-shaped members having upper and lower sides attached respectively to the upper and lower horizontal members.
4. (Previously presented) A horizontal wind generator as in claim 11 wherein the C-shaped members comprise tubular members that are split longitudinally substantially in half.
5. (Original) A horizontal wind generator as in claim 4 wherein the C-shaped members comprise longitudinally split 55 gallon plastic drums with the ends removed.
6. (Previously presented) A horizontal wind generator as in claim 11 wherein the generator includes a first set of two drive units angularly displaced at a 90° angle from each other.
7. (Original) A horizontal wind generator as in claim 6 wherein the generator includes a second set of two drive units angularly displaced from each other by a 90° angle, with the second set being displaced from the first set by a 45° angle.

8. (Previously presented) A horizontal wind generator as in claim 11 wherein the drive shaft is mounted on a thrust bearing at a lower end, the drive shaft being maintained in a vertical position by one or more vertical supports comprising a plurality of at least three rotatable wheels mounted for rotation about the axis of the drive shaft and angularly spaced around the periphery of the drive shaft.

9. (Canceled)

10. (Canceled)

11. (Currently amended) A horizontal wind generator comprising:

a horizontal windmill comprising:

a generally vertical drive shaft mounted for rotation about a vertical axis; and

at least two wind drive units mounted at predetermined angular positions around the drive shaft, each wind drive unit including one or more transverse cross members non-rotatably attached to the drive shaft and extending in opposite directions therefrom, at least one wind catcher element being mounted on the cross member on each side of the pole and spaced radially outwardly therefrom, each wind catcher element having front and rear sides, with the front side presenting greater resistance to wind flow thereover than the rear side when the sides are facing in an upwind direction, the wind catcher elements on each side of the cross member facing in opposite directions, such that a wind urges the drive unit to rotate in a direction wherein the ~~upward~~ upwind facing front side is moving in a downwind direction, the wind catcher elements being formed in the shape of generally C-shaped members having open ends, the wind catcher elements having longitudinal axes and being mounted on the cross members with their longitudinal axes being in a substantially

horizontal position, the C-shaped members having substantially straight horizontal inner and outer wind engaging sidewalls that permit wind to flow smoothly along the sidewalls between the open ends of the members; and

an electrical generator drivingly connected to the drive shaft so as to produce electrical energy in response to the rotation of the drive shaft.

12. (New) A horizontal wind generator as in claim 11 wherein each wind drive unit is mounted at a separate axial wind catching position on the drive shaft.

13. (New) A horizontal wind generator as in claim 11 wherein the cross member comprises a frame mounted on the drive shaft and extending outwardly from opposite sides thereof, the frame having upper and lower horizontal members, the front sides of the C-shaped members having upper and lower front edges attached respectively to the upper and lower horizontal members, the C-shaped members being positioned such that air flowing longitudinally along the front side of one C-shaped member from the open outer end through the open inner end at least partially flows through the open inner end of the opposite C-shaped member and thereafter flows across the front side of said C-shaped member and then out the open outer end.

14. (New) A horizontal wind generator as in claim 13 wherein the cross member includes upper and lower horizontal members on each side of the drive shaft, each C-shaped members being attached to the horizontal members on the side of the drive shaft on which the rear side of the C-shaped member extends.

15. (Canceled)

16. (Previously presented) A horizontal wind generator comprising:

a horizontal windmill comprising:

a generally vertical drive shaft mounted for rotation about a vertical axis; and

at least one wind drive unit mounted in a wind catching position on the drive shaft, the wind drive unit including a transverse cross member non-rotatably attached to the drive shaft, and at least two wind catcher elements mounted on the cross member on opposite sides of the pole and spaced radially outwardly therefrom, each wind catcher element having front and rear sides, with the front side presenting greater resistance to wind flow thereover than the rear side when the sides are facing in an upwind direction, the wind catcher elements on each side of the cross member facing in opposite directions, such that a wind urges the drive unit to rotate in a direction wherein the upward facing front side is moving in a downwind direction, the wind catcher elements comprising open ended C-shaped members, the C-shaped members comprising longitudinally split 55 gallon plastic drums with the ends removed; and

an electrical generator drivingly connected to the drive shaft so as to produce electrical energy in response to the rotation of the drive shaft.

17. (Previously presented) A horizontal wind generator comprising:

a horizontal windmill comprising:

a generally vertical drive shaft mounted for rotation about a vertical axis; and

at least one wind drive unit mounted in a wind catching position on the drive shaft, the wind drive unit including a transverse cross member non-rotatably attached to the drive shaft, and at least two wind catcher elements mounted on the cross member on opposite sides of the pole and spaced

radially outwardly therefrom, each wind catcher element having front and rear sides, with the front side presenting greater resistance to wind flow thereover than the rear side when the sides are facing in an upwind direction, the wind catcher elements on each side of the cross member facing in opposite directions, such that a wind urges the drive unit to rotate in a direction wherein the upward facing front side is moving in a downwind direction, the drive shaft being mounted on a thrust bearing at a lower end of the drive shaft, the drive shaft being maintained in a vertical position by one or more vertical supports comprising a plurality of at least three rotatable wheels mounted for rotation about the axis of the drive shaft and angularly spaced around the periphery of the drive shaft; and

an electrical generator drivingly connected to the drive shaft so as to produce electrical energy in response to the rotation of the drive shaft.

18. (New) A horizontal wind generator comprising:

a horizontal windmill comprising:

a generally vertical drive shaft mounted for rotation about a vertical axis; and

at least two wind drive units mounted to the drive shaft, each drive unit being mounted at a different axial position on the drive shaft, such that horizontal wind flow against one drive unit will not substantially interfere with horizontal wind flow against the other drive unit, each drive unit comprising oppositely facing wind catcher elements mounted on opposite sides of the drive shaft at an angular spacing of about 180 degrees, each wind catcher element having oppositely facing convex and concave sides, each wind catcher element being mounted on the drive shaft by a cross bar non-rotatably attached to the drive shaft, the drive unit having wind catcher elements only at the two angular positions spaced 180 degrees apart on opposite sides of the drive shaft and having no intervening wind catchers at other angular positions at the same axial position on the drive shaft,

such that horizontal air flow against one wind catcher element at one axial position will not substantially block air flow against another wind catcher at the same axial position; and

an electrical generator drivingly connected to the drive shaft so as to produce electrical energy in response to the rotation of the drive shaft.